The Henry Skinner Memorial Number

OCTOBER, 1926

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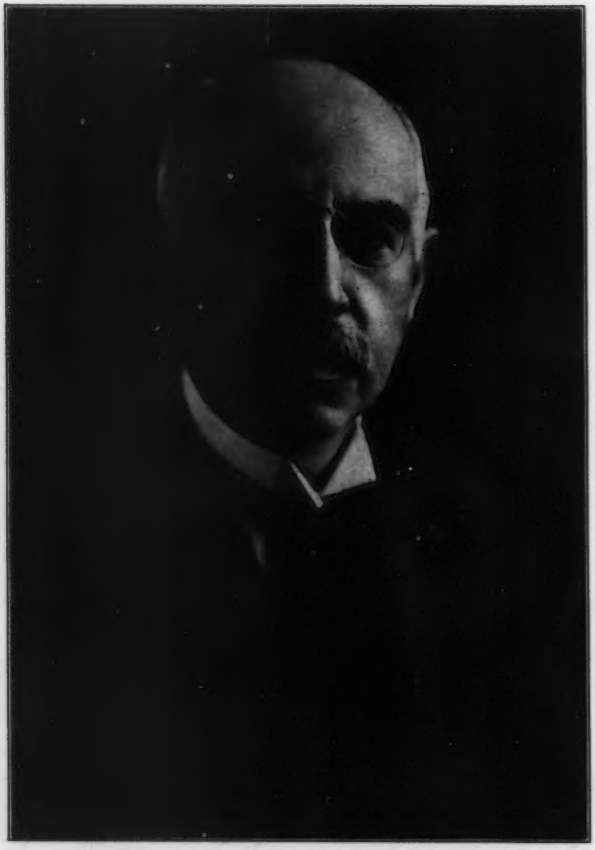
Owing to increased cost of labor and materials, no illustrations will be published in the NEWS for the present, except where authors furnish the necessary blocks, or pay in advance the cost of making blocks and pay for the cost of printing plates. Information as to the cost will be furnished in each case on application to the Editor. Blocks furnished or paid for by authors will, of course, be returned to authors, after publication, if desired.

STATED MEETINGS

Of The American Entomological Society will be held at 7.30 o'clock P. M., on the fourth Thursday of each month, excepting June, July, August, November and December, and on the third Thursday of November and December.

Communications on observations made in the course of your studies are solicited; also exhibits of any specimens you consider of interest.

The printer of the NEWS will furnish reprints of articles over and above the twenty-five given free at the following rates: One or two pages, twenty-five copies, 35 cents; three or four pages, twenty-five copies, 70 cents; five to eight pages, twenty-five copies, $1.40; nine to twelve pages, twenty-five copies, $2.00; each half-tone plate, twenty-five copies, 30 cents; each plate of line cuts, twenty-five copies, 25 cents; greater numbers of copies will be at the corresponding multiples of these rates.



HENRY SKINNER (MARCH 26, 1919)

ENTOMOLOGICAL NEWS

VOL. XXXVII OCTOBER, 1926 No. 8

The Entomological Work of Henry Skinner.

(Portrait, Plate X.)

Dr. Henry Skinner, editor of ENTOMOLOGICAL NEWS from March, 1890, to December 15, 1910, died on May 29, 1926, as has already been announced in these pages.

While his contributions to knowledge of those "frail creatures of the air," the butterflies, have been many and valuable, his chief service to Entomology has unquestionably been in and through his editorship of this monthly. His humor and his incisiveness, even caustic at times, gave it a characteristic tone which was appreciated far and wide. The early numbers contained no editorials labeled as such, but, beginning with Volume III, No. 5, for May, 1892, there is a specific entry "Editorial" in the monthly table of "Contents" and the custom thus established has persisted to this present writing, although not without some interruptions. His editorial for November, 1892, "The News Family" (iii: 228)*, gives an interesting glimpse of the division of labor connected with the production of the journal, while that for September of the same year amusingly enumerates the editor's trials with contributors' manuscripts.

A constantly repeated wish to improve the quality of the journal and to increase its size so as to accommodate the rising tide of papers offered for publication, runs through many of his monthly utterances. This necessarily depended on an increase of subscribers (ii: 119). A characteristic note is that of March, 1898: "Instead of having a subscription list of 550 it should be twice that many and we could then make the NEWS a journal of which to be proud" (ix: 68). In May,

*As some may wish fuller data on Dr. Skinner's work or life, references to the sources of many of the statements here made are given in parentheses. Where merely volume and page numbers are given, ENTOMOLOGICAL NEWS is to be understood; Trans. refers to the Transactions of the American Entomological Society; Proc. to the Proceedings of the Academy of Natural Sciences of Philadelphia.

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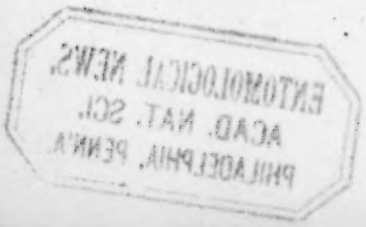
1907, he could proudly write: "In the last number issued [April] we had fifty-two pages and six full page plates" (xviii: 213). The editorial for November, 1909, reads:

"When this journal was commenced in 1890 we charged one dollar for it and the volume for that year consisted of 168 pages and no illustrations. The subscribers were pleased with our efforts and gladly paid the dollar for 16 pages per month and no illustrations. Not being published for gain but in the interest of entomology and entomologists all income was put into an increased number of pages and illustrations, the magazine being really a mutual affair for the benefit of its patrons. In our efforts to publish the papers that came to us we have steadily increased the number of pages and illustrations.

1890.....	168 pages.....	no plates
1905.....	344 pages.....	11 plates
1906.....	404 pages.....	15 plates
1907.....	458 pages.....	17 plates
1908.....	500 pages.....	25 plates

We have therefore been giving more for the money than any entomological journal in the world. We can't go on and improve as we would like and the time has arrived to decide whether to maintain the old price or increase it. At the old price of one dollar we would be compelled to refuse papers and many illustrations and on mature consideration decided to increase the subscription price to two dollars a year. We are doing this in the interest of those persons wishing an avenue of publication for short papers and also in an effort to get papers into print in as short a time as possible. It should also be remembered that at present many more papers are illustrated and for that reason the expense of publication is infinitely greater. It will also enable us to continue to publish the doings of a number of entomological societies throughout the country." (xx: 395-6.)

The volume for 1908 was the climax in point of size; never since has the NEWS quite attained those dimensions. This constant upbuilding of the journal is, we believe, Dr. Skinner's greatest contribution to entomology. When we consider the time and energy which he gave to this task—not only the editorial work but, since December, 1896 (vii: 306), supervision of the finances and distribution of the journal, we can understand the exclamations of the entomologists (xx: 435-6) which greeted his editorial last quoted.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Not merely the size of the NEWS but also the character of the illustrations in it and in entomological publications in general received much of his attention. As a lepidopterist, to whom pattern and coloring count for so much, it was natural that he should strongly advocate the use of the half-tone (ii: 101-2 and elsewhere) when it was still a new process and of the three-color when it came within the range of possibility (xi: 435).

His ideal of an entomological journal as he expressed it in June, 1891, was:

"One that covers the whole field and each number should contain matter that will please all its readers. The dry scientific article should have a place along with that of a more popular and lighter vein. A journal, any number of which is made up largely of a dry synopsis of a single family in an order, is of value to only a few readers, and the large remainder are disappointed and obliged to wait another month in hopes of finding something more tempting. The subscribers are made up of the professional entomologist, the systematist, the lover of nature in general, the amateur entomologist, those interested in entomology in general, those interested in a single order, the student and the beginner, and the scope of a journal should be such and the paging sufficient in each number to supply readable matter for all" (ii: 119).

On these lines he conducted the NEWS and the contents of the magazine ranged from notes on the genitalia of gynandromorphous Macrolepidoptera to verse on the old man in the tree Who was horribly bored by a bee. With this ideal and the financial limitations he was not always able to satisfy a "former subscriber" who wrote: "if you could give only one plate a month figuring Noctuids not in Holland's Moth Book, especially moths of the eastern United States, it would be a great help to we [*sic*] amateurs who have no State collection or others to help us identify our specimens" (xxi: 182). A different problem with subscribers was that presented by the figures on the cover of the NEWS, but a humorous defense of one of these, *Quisnam sexcaudatus* (xiii: 54-5) will be fully appreciated only by those to whom the paper covers of that volume are accessible.

But his editorials were not confined to appeals for assistance in improving the journal. Many of them urged the necessity of bettering entomological technique, the careful preparation of specimens, the use of proper pins and especially the careful labeling of material (vi: 152; vii: 94, 120, 136; viii: 171; xxvii: 85; xxxi: 202). The humor of the man is shown by a remark:

"We may also say, in passing, that we have coined a new word, 'Sloppydoptera,' which has reference to specimens captured with a baseball bat or temporarily loaned to the new baby as playthings before being 'sent out'" (xiii: 17).

Repose on roses rarely exists in reality and it is not surprising that even the satisfaction which the NEWS brought to him did not outweigh the time and labor which it cost, nor that he should desire greater freedom for research in entomology. He laid down his editorship December 15, 1910, by his own desire, and was immediately elected Editor Emeritus (xxii: 1-2).

Dr. Skinner's collecting of insects naturally began in Philadelphia and its vicinity, and near by localities like Cape May, New Jersey (i: 6-9), were soon visited. In July, 1892, he and Philip Laurent, now the member of the American Entomological Society of longest standing, sought insects in Mitchell County, North Carolina (iv: 21, 80-82), and in Maine in the summer of 1895 (vi: 272). He turned south again in the following year, to eastern Tennessee and western North Carolina (vii: 254). In 1899, with Laurent and A. J. Snyder, he collected in Utah and Colorado (x: 286, 303; xi: 363; xvi: 99-105; xxiv: 450). In 1900 he was in the Adirondacks (xi: 612), and in 1901 at Beulah, New Mexico (xii: 255), his collection furnishing a considerable list of species in many orders for the Academy in Philadelphia (Trans. xxix: 35-117). A brief trip in the Orange Mountains of New Jersey, with Messrs. Kearfott and Daecke, for *Pyrgus centaureae*, was taken in the spring of 1904 (xv: 256). In 1905 he secured many specimens in Carr Canyon, Huachuca Mountains, Arizona, with C. R. Biedermann (xvi: 275; Proc. 1905: 926). Harvey's and Ganoga Lakes, Pennsylvania, attracted him

along with Messrs. Lister, Kearfott and the two Wenzels in June, 1906 (xvii: 264-5). In 1907 he was in Canada—Manitoba, Saskatchewan and Alberta—with Dr. James Fletcher (Can. Ent. xl: 14, 220; Proc. 1907: 574). He collected in the White Mountains of New Hampshire in 1913 (xxiv: 479 and Proc. 1913: 706) and in 1918 (xxx: 48 and Proc. 1918: 351); in Cuba in February, 1914, as the guest of Dr. C. T. Ramsden (xxv: 110 and Proc. 1914: 656) and in Colorado, Utah and Wyoming, with Mr. R. A. Leussler in 1920 (xxxi: 227; xxxii: 95; Ann. Rept. Ac. Nat. Sci. 1921: 30-38).

Like many field naturalists, his own entomological collection embraced at first insects of all orders, but some of these, other than Lepidoptera, were disposed of as early as 1890. Still later he limited himself to the Rhopalocera. On an interleaved page between pages vi and vii of his own copy of his *Synonymic Catalogue of the North American Rhopalocera* of 1898 is written in his own hand: "Collection of North American Butterflies belonging to Henry Skinner. Contains about 645 species and 5758 specimens in the arranged collection. There are about 5000 duplicates, spread and in papers. Exotic collection of about 2000 specimens in a walnut cabinet with 40 drawers." The date of this note is unknown. In 1908 his collection of American butterflies, then "numbering over 10,000 specimens," was purchased by the Academy of Natural Sciences of Philadelphia.

Dr. Skinner's original work deals chiefly with the butterflies, the Rhopalocera. His first published note (1882), of but eighteen lines, gives means of distinguishing the male from the female of *Argynnis idalia* by their respective modes of flight and notes the greater concealment practised by the female; the author's name, for perhaps the only time, appears as Harry Skinner. A verbal communication to the Academy in the following year (1883) recorded his observation of *Argynnis cybele* dropping her eggs from a height of one foot on to the food plant, violets, below; it was subsequently quoted by Dr. Scudder and evoked some discussion. Not until 1889 did he publish descriptions of new species—*Anartia dominica* from Hayti and *Myscelia streckeri* from Lower California.

His *Impressions Received from a Study of our North American Rhopalocera* (1896) is one of his most general papers. After quoting a familiar definition of species he continues:

"A species based on the morphological part of our definition I hold to be purely tentative (as we must apply the physiological part of the definition before we can be absolutely sure we have a valid species, but unfortunately it is only seldom, or after the lapse of much time that specific value is capable of such proof). Now my idea is that instead of relying to too great an extent on morphological definitions we could fix the value of those modifications by analogy or comparative value" (p. 108).

After referring to causes producing variation in Lepidoptera, a long quotation from A. H. Swinton's *Insect Variety* is given with the object of applying Swinton's conclusions to North American Lepidoptera. Going through the North American Rhopalocera he lists the species of each genus with regard to their "comparative value."

His paper on Antigeny in Lepidoptera (1913) is a useful summary of the differences, chiefly in color, between the two sexes of our butterflies.

Still another general paper was that on *Mimicry in Boreal American Rhopalocera* (1912), called forth by Prof. E. B. Poulton's address to the Entomological Society of America at Baltimore in December, 1908, on this subject. After discussing the question in some detail, Dr. Skinner took "the view that there is not enough evidence to substantiate the hypothesis of mimicry in North American butterflies."

Without detailing his work any further, since a good idea of it may be gained by examining the accompanying bibliography compiled by Mr. Cresson, we may remark that it was especially to the knowledge of the family Hesperidae, skippers, that he has contributed. His paper of 1895, on the Boreal American species of *Pamphila,* shows him actively at work on them.

As his energies were released from the editing of the NEWS, he took up the study of the male genitalia of the genus *Thanaos* where it had been left by Scudder and Burgess in 1870, and produced his paper of 1914. The culmination was reached

in the six papers by him and Mr. Roswell C. Williams, Jr., on *The Male Genitalia of the Hesperidae of North America* 1922-24.

To beginners in entomology Dr. Skinner was very kind and helpful and when his death was formally announced at the following meeting of the American Entomological Society, the younger members spoke appreciatively of the assistance which they had received from him.

His participation in entomological and other scienitfic societies was active. He became a member of the Academy of Natural Sciences of Philadelphia April 26, 1881, and at its meetings he made some of his earliest communications on Lepidoptera. He was elected custodian of the Entomological Section of the Academy, December 8, 1884, and December 14, 1885 (Trans. xi: p. xli; xii, p. xxiv), having become a member of the Section November 10, 1882 (Trans. x: p. xiv). After an interval of several years he again became Conservator, rather than Custodian, of the Section in 1890 and so continued until the abolition of the sections in 1924. He was also an Assistant to the Curators, Special Curator and Curator of the Department of Insects (the title varied from time to time), but in charge of that department from 1890 until his death, and Curator of the American Entomological Society from 1885 to 1887, 1890 to 1916, in which year the latter body placed its collections on deposit with the Academy. He devised a frame for holding Schmitt boxes in a sheet tin case, which was speedily adopted for the Academy's insects (xv: 178). The Academy placed him on its Committees on Publication (chairman for some years) and on Instruction and Lectures and on its Council (1907 on) and chose him a Vice President in 1918. For many years he gave public lectures on entomological topics in the Ludwick Institute course at the Academy.

By reason of the close relations between the Academy and the American Entomological Society, he entered the membership of the latter on March 9, 1883, through the former. He served as Recording Secretary of the Society 1898-1915, as President 1916-1925 and was made an Honorary Member in 1926.

As early as 1892 (iii: 93-94) he proposed a national association of entomologists. When the idea, if not his own plan, was realized by the formation of the Entomological Society of America, he was elected both a fellow and a vice president at its initial meeting in New York City, December 28, 1906 (xviii: 62) and presided at its Boston meeting August 22, 1907 (xviii: 369). The next year, at Baltimore, December 31, he became President (xx : 94) and again presided at the Boston meeting of December 30 and 31, 1909 (xxi: 92).

When international entomological congresses were suggested, he was made Chairman of the committee for the United States (xx: 368). In 1910 he attended the first Congress at Brussels, where he was President of the Section on Nomenclature and read a paper on *One Hundred Years of Entomology in the United States* (xxi: 364, 379, 381; xxii: 48). From Brussels he went on to the Eighth International Congress of Zoology at Graz (xxi: 477). On October 1, 1910, he was made a member of the permanent committee of the entomological congresses. Two years later, with his family, he was at the Second Entomological Congress at Oxford, where he was vice president of the Section on Evolution, Bionomics and Mimicry, August 6, 1912 (xxiii: 375, 382).

From March, 1913, on he was a member of the International Commission of Zoological Nomenclature (xxiv: 328). A member of the American Association of Economic Entomologists since June 23, 1900, he was a Vice President in 1903. He was a Fellow of the American Association for the Advancement of Science and served as Secretary of the Council in 1915 and as General Secretary in 1916. He was one of the founders of the Geographical Club (later Geographical Society) of Philadelphia in 1891. He was elected a member of the Sociedad Cubana de Historia Natural "Felipe Poey" in 1919 and of the American Philosophical Society in 1922. The University of Pittsburgh conferred the honorary degree of doctor of science upon him June 14, 1911.

He was Philadelphia born, March 27, 1861; the son of William S. and Sarah (Irvin) Skinner. He attended the public schools and was graduated from Rugby Academy in 1879.

From the University of Pennsylvania he received the degrees of B.S. in 1881 and M.D. in 1884. He was assistant to Dr. Wm. Goodell in the practice of gynaecology from 1884 to 1900. His medical work also brought him on professional visits to the inmates of the Eastern Penitentiary, in the built-up portion of his native city, and gave rise to his curious note on a collection of 18 species of insects made by a prisoner within a yard 14 x 17 feet enclosed by stone walls 11½ feet high (i: 19-20). From 1900 on he abandoned medicine completely for entomology, although his training naturally caused him to take much interest in the insect carriage of human diseases, as that subject developed.

In 1886 he married Celia Angela Beck of Philadelphia who, with a daughter, Marian, now Mrs. Harvey Madera, and a son, Henry, survive him.

Until after the death of his parents, he resided in the parental home at 716 North 20th St., Philadelphia, where ever and anon he welcomed a meeting of the Feldman Collecting Social (vii: 93; x: 152; xvii: 265). About 1907 he moved to Ardmore, Pennsylvania, and still later to a farm between Narberth and Falls of Schuylkill where he lived until his death.

For nearly forty years the writer has been in contact with Dr. Skinner, although latterly increasing work at the University and more remote residence have prevented me from seeing him as frequently as in earlier days. I am deeply conscious that he had a great influence upon my life. I looked to him for sympathy in my work and found it. I think he felt the same toward me. There is now a void which no one else can fill.

PHILIP P. CALVERT.

Frank Cowan.

Apropos of Mr. Weiss's article, *Frank Cowan and his "History of Insects"*, in the NEWS for July last, pages 212-214, it is of interest to mention that the name of the "Hon. Frank Cowan" occurs in the NEWS for October, 1902 (vol. xiii, p. 126), in the list of those who had signified their intention to become members of the Entomological Society of Western Pennsylvania.

Entomological Bibliography of Henry Skinner.

Compiled by E. T. CRESSON, JR.

1882. Some peculiarities of *Argynnis idalia*. Can. Ent. xiv, p. 20.—Scent organ of *Papilio*. Proc. Ac. Nat. Sci. Phila., xxxiv, p. 239.

1883. Ovipositing of *Argynnis cybele*. Proc. Ac. Nat. Sci. Phila., xxxv, p. 36.

1887. Variation in *Argynnis myrina*. Trans. Am. Ent. Soc., xiv, p. v.

1889. Two new species of butterflies. Trans. Am. Ent. Soc., xvi, p. 86-97.—A list of the butterflies of Philadelphia, Pa. (with E. M. Aaron). Can. Ent., xxi, p. 126-131, 145-149.—Butterflies at Qu'appelle, Assa. Can. Ent., xxi, p. 238-240.

1890. Notes on butterflies found at Cape May, N. J., with a new species of *Pamphila*. i, p. 6-9.*—A royal Entomologist. i, p. 10-11.—Philadelphia's "White Pasha." i, p. 11.—Home-made cork. i, p. 12.—Random notes on Lepidoptera. i, p. 19-20.—[Note on] the Entomologische Zeitschrift. i, p. 31.—Notes on Lepidoptera. i, p. 51-52.—[Note on *Callosamia angulifera*.] i, p. 58.—[Note on the Luna moth]. i, p. 76.—Geographical variation. i, p. 84-86.—[Notes on *Terias nicippe*, *Neonympha mitchellii*]. i, p. 129.—Obituary notice. i, 146.

1891. [Note on the hickory-horned devil]. (Ed.). Ent. News, ii, p. 1-2, pl. 1.—Exchange list of butterflies of America north of Mexico. ii, p. 12, suppl., iv. pp.—[Note on the illustration of *Citheronia regalis*]. ii, p. 21, pl. 2.—Obituary notices. ii, p. 11, 40, 80, 100, 128, 168, 188.—Inoculated with electricity. ii, p. 55.—[Note on plate of *Kallima paralekta*]. ii, p. 81-82, pl. 5.—Elementary entomology. ii, p. 89, 91, 110-112, 137-138, 157, 177-179, 196-197.—[Notes on *Erebus zenobia*, and *Diphthera festiva elegans*]. ii, p. 92.—[Note on illustration of two rare hesperids]. ii, p. 101-102, pl. 1 [5a.]—Henry Edwards. (Obituary.) ii, p. 129-130, pl. 6.—[Note on illustration of the owl butterfly]. ii, p. 149-150, pl. 7.—Random notes on lepidoptera. ii, p. 158-159.—A new *Pamphila*. ii, p. 175.—[Note on plate showing half-tone color valuation]. ii, p. 189-190, pl. 9.

1892. [Note on plate of butterflies]. iii, p. 49, pl. 2.—Obituary notices. iii, p. 72, 104, 191-192.—[Note on entomological excursions]. (Ed.). iii, p. 93-94.—[Note on

*Where merely volume and page numbers are given, ENTOMOLOGICAL NEWS is to be understood.

Electricia tomfooleryensis]. iii, p. 96.—Ovipositing in the genus *Argynnis*. Can. Ent., xxiv, p. 128-129.—Greenland Lepidoptera. (with Levi W. Mengel). Proc. Acad. Nat. Sci. Phila., 1892. p. 156-159.—[Note on plate of papilios]. iii, p. 105, pl. 4.—Entomological rubbish. (Ed.). iii, p. 118-119.—[Note on plate of *Datana ministra*]. iii, p. 129, pl. 5.—A new species of *Eudamus*. Can. Ent., xxiv, p. 164.—[Note on a plate of rare moths.] iii, p. 165, pl. 6.—A new species of *Pamphila*. iii, p. 174-175.—[Note on plate of *Sphinx rustica*]. iii, p. 193, pl. 7.—[Note on plate of *Protoparce cingulata*]. iii, p. 218, pl. 8.—A new *Pamphila*. iii, p. 222-223.—The News family. (Ed.). iii, p. 228.—Your photograph wanted. (Ed.). iii, p. 260.

1893. The larva and chrysalis of *Chrysophanus dione*. Can. Ent., xxv, p. 22.—Isaac C. Martindale (Obituary). iv, p. 37-38, pl. 2.—A new *Eudamus*. iv, p. 64-65.—Two weeks collecting trip in N. Carolina by Henry Skinner, and description of a new moth by John B. Smith. iv, p. 80-84.—Obituary notices. iv, p. 127, 280.—[Note on a life history collection of *Ocneria dispar*.] iv, p. 159.—[Note on first number of the Journal of the N. Y. Ent. Soc.]. iv, p. 185.—[Obituary notice of Dr. John L. LeConte]. iv, p. 185, pl. 10.—Three new species of *Pamphila*. iv, p. 211-213.—[Note on plate of *Argynnis oweni* and *cornelia*]. iv, p. 217, pl. 11.—*Carterocephalus palaemon*. Can. Ent., xxv, p. 257.—Notes on *Argynnis cybele* and *leto*. iv, p. 318-319.

1894. Obituary notices. v, p. 32, 96, 160.—Borrowing books. (Ed.). v, p. 72.—*Tachyris ilaire* n. var. *neumoegenii*. v, p. 110, pl. 4.—The new entomology. (Ed.). v, p. 115.—Type specimens (Ed.). v, p. 142.—Edward Norton (Obituary). v, p. 162-163, pl. 6.—[Note on *Thecla acis*.] v, p. 180.—Field meeting. (Ed.). v, p. 181.—The Association of Economic Entomologists. (Ed.). v, p. 248.—Benjamin Dann Walsh. p. 269-270, pl. 9.—An experience. (Ed.). v, p. 282.—Distribution of entomologists. (Ed.). v, p. 310.—A new *Eudamus*. v, p. 332.

1895. A monument to Thomas Say. (Ed.). vi, p. 45.—Obituary notices. vi, p. 64, 132, 172, 240, 340.—Berthold Neumoegen. Obituary) vi, p. 66-67, pl. 3.—Notes on Rhopalocera, with descriptions of new species. vi, p. 112-114.—*Colias hecla*. Psyche, vii, p. 244.—Popular entomology—A chase for a butterfly. vi, p. 145-147.—Labeling insects. (Ed.). vi, p. 150-151.—A new departure. (Ed.). vi, p. 187, 254.—[C. Ernst. Seeber]. (Obituary). vi, p. 195-196, pl. 7.—A new *Aegiale (Megathymus)*. Can. Ent., xxvii, p. 179.—The

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1924. Loan of types. (Ed.). xxxv, p. 22.—Obituary: Philip Nell. xxxv, p. 35.—Obituary: Nathaniel Charles Rothchild. xxxv, p. 76.—On the male genitalia of the Hesperidae

of North America. Paper iv. (with R. C. Williams). Trans. Am. Ent. Soc. l, p. 57-74, ill.—*Kloneus babayaga.* xxxv, p. 229-230.—Duty on insects again. (Ed,). xxxv, p. 256.—Review: Études de Lepidopterologie Comparee par Charles Oberthur. Fasc. xxii, part I. Ent. News, xxxv, p. 262.—On the male genitalia of the Hesperidae of North America. Paper v. (with R. C. Williams). Trans. Am. Ent. Soc., l, p. 141-156, ill.—On the male genitalia of the Hesperidae of North America. Paper vi. (with R. C. Williams). Trans. Am. Ent. Soc., l, p. 177-208.—Charles Oberthur. (Obituary and Ed.). xxxv, p. 267-269.—Review: Manual of tree and shrub insects. By E. P. Felt. xxxv, p. 342.

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1926. *Enodia portlandia, andro, macha* and *creola.* xxxvii, p. 42-43.—Review: Manual of injurious insects. By G. W. Herrick. xxxvii, p. 62.

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Natural Sciences of Philadelphia: Ent. News, i, p. 48, 63-64, 79-80, 115, 150; ii, p. 18-20, 60, 80, 126-127, 146-147, 187-188; iii, p. 22-23, 72, 103, 128, 164, 239-240; iv, p. 21-22, 98, 133, 163, 208, 241-242, 308-309, 336-337; v, p. 24, 85-86, 154, 193-194, 233-234, 292; vi, p. 94, 166, 197-198, 302-303, 331; vii, p. 58-59, 148-150, 283-284; viii, p. 206-207, 230-231, 254-255; ix, p. 31, 54-55, 126-127, 183-184, 231; x, p. 20-21, 79-80, 155-156, 273-274; xii, p. 346-347, 380, 482, 608, 609; xii, p. 29-30, 63, 95-96, 160, 221-222, 293-294; xiii, p. 26-27, 62, 96, 168, 332-333; xiv, p. 62-64, 130-131, 164, 308; xv, p. 48, 108-109, 174-175, 287-288, 316-317; xvi, p. 23-24, 55-57, 311-312; xvii, p. 103-104, 182, 183-184; xviii, p. 28-31, 265-266, 456-457; xix, p. 440-444; xx, p. 183-186, 443-444; xxi, p. 334-337; xxii, p. 46, 138-139, 237-239, 379-381; xxiii, p. 138-141, 384-385; xxiv, p. 142-143, 286-288, 477-480; xxv, p. 141-143, 477-480; xxvi, p. 143-144, 334, 431-432.

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List of New Genera and Species Described by Henry Skinner.

Compiled by E. T. Cresson, Jr.

COLEOPTERA.

Cantharidae.

Cantharis pilsbryi, Ent. News, xvii, p. 217.

Cleridae.

Cleris bimaculatus. Ent. News, xvi, p. 291.

Cymatodera tricolor. Ent. News, xvi, p. 292.

Meloidae.

Calopasta wenzeli, Ent. News, xv, p. 217.

Epicauta abadona, Ent. News, xv, p. 217.

Epicauta alastor, Ent. News, xv, p. 217.

Tegrodera aloga, Ent. News, xiv, p. 168.

Buprestidae.

Acmaeodera biedermani, Ent. News, xiv, p. 239.

Tyndaris barberi, Ent. News, xiv, p. 238.

Tyndaris chamaeleonis, Ent. News, xiv, p. 237.
Tyndaris olneyae. Ent. News, xiv, p. 236.
Tyndaris prosopia, Ent. News, xiv, p. 237.

Scarabaeidae.

Plusiotus beyeri, Ent. News, xvi, p. 289.

Cerambycidae.

Acanthocinus linearis, Ent. News, xvi, p. 290.
Lypsimena tigrina, Ent. News, xvi, p. 291.
Oncideres quercus, Ent. News, xvi, p. 291.

HYMENOPTERA.

Ichneumonidae.

Metopius harbecki, Ent. News, xvii, p. 150.

LEPIDOPTERA.

Papilionidae.

Parnassius immaculata, Ent News, xxii, p. 108.
Papilio asterias alunata Skinner & Aaron, Can. Ent., xxi, p. 127.
Papilio philenor hirsuta, Ent. News, xix, p. 149.
Papilio polyxenes curvifascia, Ent. News, xii, p. 183.
Papilio rutulus arcticus, Ent. News, xvii, p. 379.

Pieridae.

Anthocharis genutia flavida, Ent. News, xviii, p. 438.
Colias hecla pallida Skinner & Mengel, Proc. Acad. Nat. Sci. Phila., 1892, p. 156.
Pieris rapae immaculata, Can. Ent., xxi, p. 128.
Tachyris ilaire neumoegenii, Ent. News, v, p. 110.

Satyridae.

Chioñobas alberta oslari, Ent. News, xxii, p. 220.
Debis creola, Ent. News, viii, p. 236.
Erebia epipsodea sine-ocellata, Can. Ent., xxi, p. 239.

Nymphalidae.

Anartia dominica, Trans. Am. Ent. Soc., xvi, p. 86.
Argynnis apacheana nom. n., Ent. News, xxix, p. 67.
Argynnis californica, Ent. News, xxviii, p. 328.
Argynnis laurenti, Ent. News, xxiv, p. 450.
Argynnis platina, Can. Ent., xxix, p. 154.
Argynnis sakuntala, Ent. News, xxii, p. 108.
Argynnis snyderi, Can. Ent., xxix, p. 154.
Argynnis utahensis, Ent. News, xxx, p. 216.
Catagramma oberthuri, Ent. News, xxvii, p. 307.
Eresia texana seminole, Ent. News, xxii, p. 412.
Lemonias palmeri marginalis, Ent. News, xxxi, p. 175.
Melitaea arida, Ent. News, xxviii, p. 328.
Melitaea damoetas, Ent. News, xiii, p. 304.
Melitaea glacialis, Ent. News, xxxii, p. 89.
Melitaea maria, Can. Ent., xxxi, p. 12.
Melitaea neumoegeni, Ent. News, vi, p. 113.
Phyciodes barnesi, Can. Ent., xxix, p. 155.

Libytheidae.

Mesosemia ramsdeni, Ent. News, xxiii, p. 126.

Lycaenidae.

Lycaena chlorina, Ent. News, xiii, p. 15.

Lycaena lygdamus columbia, Ent. News, xxviii, p. 213.

Lycaena neurona, Ent. News, xiii, p. 15.

Thecla damon discoidalis, Can. Ent., xxix, p. 156.

Thecla johnsoni, Ent. News, xv, p. 298.

Thecla loki, Ent. News, xviii, p. 378.

Thecla sarita, Ent. News, vi, p. 112.

Hesperiidae.

Aegiale streckeri, Can. Ent., xxvii, p. 179.

Amblyscirtes celia, Ent. News, vi, p. 113.

Bungalotis canalis, Ent. News, xxxi, p. 134.

Bungalotis immaculata, Ent. News, xxxi, p. 133.

Callimormus dimidiatus, Ent. News, xxxi, p. 134.

Choranthus haitensis, Ent. News, xxxi, p. 187.

Copaeodes chromis, Ent. News, xxx, p. 100.

Cyclogypha gundlachi Skinner & Ramsden, Proc. Acad. Nat. Sci. Phila, lxxv, p. 314.

Ephyriades cubensis, Ent. News, xxiv, p. 72.

Eudamus aemilea, Ent. News, iv, p. 64.

Eudamus coyote, Can. Ent., xxiv, p. 164.

Eudamus outis, Ent. News, v, p. 332.

Eudamus parvus, Ent. News, xxxi, p. 134.

Eudamus protillus rauterbergi, Ent. News, vi, p. 113.

Lerodea neamathla Skinner & Williams, Trans. Am. Ent. Soc., lxix, p. 145.

Megathymus neumoegeni stephensi, Ent. News, xxiii, p. 126.

Megathymus polingi, Ent. News, xvi, p. 232.

Megathymus yuccae navajo, Ent. News, xxii, p. 300.

Mimoniades aemulus, Ent. News, xxxi, p. 132.

Mimoniades amans, Ent. News, xxxi, p. 132.

Myscelia streckeri, Trans. Am. Ent. Soc., xvi, p. 87.

Pamphila aaroni, Ent. News, i, p. 6.

Pamphila alcina, Ent. News, iv, p. 212.

Pamphila carolina, Ent. News, iii, p. 222.

Pamphila errans, Ent. News, iii, p. 174.

Pamphila howardi, Can. Ent., xxviii, p. 187.

Pamphila mystic pallida, Ent. News, xxii, p. 412.

Pamphila oslari, Ent. News, x, p. 112.

Pamphila panoquinoides, Ent. News, ii, p. 175.

Pamphila pawnee montana, Ent. News, xxii, 413.

Pamphila quinquemacula, Ent. News, xxii, p. 413.

Pamphila sassacus dacotae, Ent. News, xxii, p. 412.

Pamphila scudderi, Ent. News, x, p. 111.

Pamphila stigma, Can. Ent., xxviii, p. 188.

Pamphila streckeri, Ent. News, iv, p. 211.

Pamphila sylvanoides utahensis, Ent. News, xxii, p. 413.
Pamphila vierecki, Ent. News, xiii, p. 213.
Pamphila yehl., Ent. News, iv, p. 212.
Pseudosarbia flavo fasciata, Ent. News, xxxii, p. 236.
Proteides jamaicensis, Ent. News, xxxi, p. 133.
Pyrrhocalles antiqua orientis, Ent. News, xxxi, p. 152.
Pyrrhopyge sangaris, Ent. News, xxxii, p. 236.
Pyrrhopyge viriditas, Ent. News, xxxi, p. 132.
Pyrgus occidentalis, Ent. News, xvii, p. 96.
Telegonus antiguus, Ent. News, xxxxi, p. 133.
Thanaos burgessi, Trans. Am. Ent. Soc., xl, p. 203.
Thanaos scudderi, Trans. Am. Ent. Soc., xl, p. 215.
Thymele angustus, Ent. News, xxxi, p. 133.

Sphingidae.

Kloneus babayaga n. gen. & n. sp., Ent. News, xxxiv, p. 138.
Sphinx luscitiosa una, Ent. News, xiv, p. 168.

Syntomidae.

Cosmosoma rubrigutta, Ent. News, xvii, p. 96.
Syntomeida befana, Ent. News, xvii, p. 379.

Arctiidae.

Ruscino arida, Ent. News, xvii, p. 95.

Uraniidae.

Nyctalemon curvata, Proc. Acad. Nat. Sci. Phila., 1903, p. 298.

Noctuidae.

Anarta besla Skinner & Mengel, Proc. Acad. Nat. Sci. Phila., 1892, p. 158.
Autographa olivacea, Ent. News, xxviii, p. 329.
Erythroecia hebardi, Ent. News, xxviii, p. 329.
Rhescipha snowi, Ent. News, xvii, p. 95.

Notodontidae.

Crinodes biedermani, Ent. News, xvi, p. 209.

Geometridae.

Glaucopteryx immaculata Skinner & Mengel, Proc. Acad. Nat. Sci. Phila., 1892, p. 159.
Psychophora fasciata, Ent. News, xiii, p. 141.

Aegeriidae.

Albuna beutenmulleri, Ent. News, xiv, p. 126.

Miscellaneous Observations on a Cranberry Scale Targionia dearnessi (Ckll.) (Homop.: Coccidae).[1]

By Donald S. Lacroix.

During the fall of 1924 the writer found a peculiar scale insect on the cranberry in the town of Sandwich, Massachusetts. The insect at once became of interest because of its apparently

[1] Contribution from the Entomological Laboratory of the Massachusetts Agricultural Experiment Station, Amherst, Mass.

solitary mode of existence, an unusual trait among the Coccidae. The full-grown females could be found scattered here and there over the bog, only one scale to an upright, though in rare cases two scales were found on the same stem. Further investigations indicated that the insect occurred on many widely separated cranberry bogs and under a variety of conditions. It appeared to be fully as abundant on bogs subjected to regular flowages as on dry bogs. It infested the Early Black, Howe and Chipman varieties with no apparent preference for any one of the three kinds. No injury of any importance could be traced to the activities of the scale. A similar insect was found on bearberry *(Arctostaphylos uva-ursi)* around the edges of cranberry bogs.

Specimens from both food plants were identified by Dr. Harold Morrison, of the Bureau of Entomology as *Targionia dearnessi* (Ckll.)

This species occurs throughout the United States from Wisconsin to Florida, west to California, and north into Canada.

Food plants listed are bearberry, cranberry, summer farewell *(Kuhnistera pinnata)* and "several unknown weeds."

DESCRIPTION.

Scale of adult female sub-oval, 2 mm. long; moderately convex; color dirty white to pale gray; exuviae subcentral, yellow; ventral scale thick.

Scale of adult male elongate, parallel-sided, 1 mm. long and 0.5 mm. wide; color white; exuvia at one end, color yellow; covered with a white secretion.

Adult female—"Dark yellowish-brown, after prolonged boiling in KHO becoming transparent and almost colorless, except that the lobes remain dark brown. No circumgenital grouped glands. Only one pair of lobes, these short, parallel, very close together, practically contiguous at the tips, their ends broad and obliquely truncate, breadth of a lobe greater than its length beyond the general margin. Apparently no squames. Margin irregularly bluntly serrulate; a small projection near the lobes, and two much larger ones at considerable distances beyond, much in the style of *A. bigeloviae*. Anal orifice oval, a considerable distance from the hind end. Surface striated, with rows of small round dorsal glands, much in the manner of *A. bigeloviae*. Mouthparts large."[2]

[2] Cockerell, Can. Ent., XXX, 266-267, 1898. *A. bigeloviae* refers to *Aspidiotus bigeloviae*, the genus in which *dearnessi* was originally placed.

Adult male—0.5 mm. long; reddish brown in color; legs light yellow, with sparse hairs; tarsi terminated with single, slightly curved sharp claw; wings hyaline; antennae 8-segmented, each segment with numerous hairs; stylus one-half the length of body, ending in a sharp pointed elongation.

Life History.

Adult females live over winter beneath the scale covering. Eggs become evident within the body of the female late in the spring and were found in one female in the laboratory in early winter, December 24, 1924.

The first crawling young hatched June 16, 1925, and three days later most of the young which hatched on that date had settled down on the fresh growth of cranberry and had started to secrete a covering. The first stages of this secretion resemble filaments of absorbent cotton, but finally become matted together and the outlines of the individual strands are lost.

The tendency of the crawling young is to settle down at the base of a leaf stem or a bract, and in the majority of cases on new growth. Some settled on old wood. The young also exhibit a "wanderlust" and move away from the upright bearing the parent to search for new uprights where the females live the rest of their lives. Only occasionally did the writer find more than one female on an upright. The males, on the other hand, tend to colonize, and anywhere from one to ten may be found to an upright.

On July 13, 1925, the first second stage female was found.

On August 5, 1925, the first male pupa was found beneath its scale covering, and males were emerging August 20-24, 1925. By September 1, 1925, practically all the females were full grown. Judging from these observations, it would seem that the length of life of the female from hatching to the attainment of full growth is about seventy-five days.

The stem of the cranberry becomes somewhat swollen where the female is attached to the upright. This swelling is first noticeable about six weeks after the female has started feeding.

Parasites.

This scale is subject to parasitism to a considerable extent. Possibly one-third of the scales found on a bog in the fall will show exit-holes of parasites. Two species of Hymenoptera were reared from the scale and were determined by Mr. A. B. Gahan, of the Bureau of Entomology, as *Coccidencyrtus ensifer* (How.), and *Signiphora* sp. probably new.

Notes on Some Alberta Bombidae (Hymen.).

By FERRIS NEAVE,

Department of Zoology, University of Manitoba.

The following notes are based on specimens of Bombidae collected in Jasper National Park, Alberta, during the summer of 1925, together with a few records gathered during a stop-off at Edmonton. The species found are not the result of an exhaustive search, but were picked up from time to time during the course of other work. Nevertheless, the number of species which were obtained in this way, together with the fact that the altitudes of the various localities were carefully noted, seems to justify a brief record of the forms which were encountered.

I am indebted to Dr. H. J. Franklin for the determination of several of the species here listed.

The country at Edmonton is Transitional in character and several species were obtained here which are probably absent from the mountains.

The Jasper records are all from the Canadian Zone or higher. At the localities where Bombidae were collected, the Hudsonian Zone begins roughly at 4,500 feet and the timber-line runs at about 6,500 feet.

Bombus occidentalis Greene. Jasper, up to 3,800 feet.

B. terricola Kirby. Edmonton[1]; Jasper, up to 3,600 feet.

B. borealis Kirby. Edmonton.

B. kirbyellus Curt. Jacques Lake, 4,700 feet.

B. strenuus Cress. Mt. Edith Cavell, 6,700 feet. A northern form, previous recorded from Alaska and Hudson Bay Country (Franklin, Bombidae of the New World, p. 298.)

B. ternarius Say. Edmonton, common.

B. huntii Greene. Edmonton.

B. bifarius Cress. Jasper, up to 3,700 feet.

B. melanopygus Nyl. Jasper; Jacques Lake; Maligne Lake; Mt. Edith Cavell. Altitudes, 3,800-6,700 feet. Apparently the commonest species in the Hudsonian Zone, from which it extends into the Canadian on the one hand and the Arctic Alpine on the other.

[1] The altitude of Edmonton is approximately 2,100 feet. The lowest level visited at Jasper was 3,400 feet.

B. sylvicola Kirby. Medicine Lake; Maligne Lake; Mt. Edith Cavell. Altitudes, 4,600-7,000 feet.

B. vagans Smith. Edmonton; Jacques; Medicine Lake; Jasper, up to 4,500 feet.

B. centralis Cress. Medicine Lake; Jacques Lake; Mt. Edith Cavell. All the specimens obtained were from the Hudsonian, 4,600-5,600 feet.

B. mixtus Cress. Medicine Lake; Twin Lakes; Jacques Lake; Maligne Lake; Mt. Edith Cavell. Hudsonian, extending into the Arctic Alpine, 4,600-6,700 feet. Some of the males were so dark as to be colored like *B. vagans,* with which they sometimes occurred.

B. californicus Smith. Jasper, 1 female, 3,800 feet.

Psithyrus insularis Smith. Edmonton; Jasper; Jacques Lake; Maligne Lake. Up to 5,500 feet.

P. ashtoni Cress. Jasper, 2 males, 3,500 feet and 3,800 feet. Regina is the most westerly record given for this species by Franklin.

P. suckleyi Greene. Edmonton.

P. fernaldae Franklin. Mt. Edith Cavell, 5,900 feet. Specimens of *P. tricolor* Franklin, which is probably the male of this species, were taken in company with the above female and also at Medicine Lake and Maligne Lake at altitudes ranging from 4,600 feet to 6,700 feet.

While further collecting would doubtless extend the vertical range of these species, the evidence obtained is probably sufficient to show roughly the zones commonly occupied in the localities in question. As is to be expected, the vertical distribution of most of the forms corresponds in a general way with the regional distribution so far as it is known. *B. terricola, borealis, ternarius* and *vagans* are, speaking comparatively, southern and eastern forms, while *B. occidentalis, huntii* and *californicus* may be similarly regarded as southern and western. The territories of several of these species overlap at Edmonton, but none of them except *vagans* was found at any considerable altitude at Jasper. On the other hand, *melanopygus, mixtus, kirbyellus, sylvicola* and *strenuus* are typically northern forms, and the data given above indicate that in the latitude of Jasper they are most plentiful above the Canadian Zone. *B. strenuus* in particular is probably confined to the upper slopes. From

the data obtained, *B. vagans, B. melanopygus* and *P. insularis* would seem to have the greatest depth of range.

Rearranged on the basis of their vertical distribution, the species listed appear to fall into five groups, the members of each group being co-extensive in the localities given, as follows:

I. *B. borealis, B. ternarius, B. huntii, P. suckleyi.* II. *B. occidentalis, B. terricola, B bifarius, B. californicus, P. ashtoni.* III. *B. vagans, P. insularis.* IV. *B. kirbyellus, B. melanopygus, B. sylvicola, B. centralis, B. mixtus, P. fernaldae.* V. *B. strenuus.*

Notes on Tree and Shrub Insects in Southeastern Pennsylvania.

By A. B. Wells, Bureau of Plant Industry,
Bryn Athyn, Pennsylvania.

The juniper webworm, *Dichomeris marginellus* Fab., is common on Irish and Swedish junipers in southeastern Pennsylvania. A few moths, many pupae and a few caterpillars were observed June 3, 1925. Moths and pupae were observed June 29, 1925, and moths and parasites were observed July 7, 1924. Pupae were observed May 18, 1925, by Mr. Floyd Smith. Small larvae in hibernating webs have been observed during September, October, November, December and January. Dusting and spraying with arsenates in April gave a slow but finally fairly complete killing of the larvae.

Moths of the arborvitae leaf miner, *Argyresthia thuiella* Packard, were observed flying from the first of June to the 15th of July though very few were seen after the middle of June. Caterpillars in mines were observed this fall.

Moths of the common bagworm, *Thyridopteryx ephemeraeformis* Haw., were observed September 8, 1925.

Moths of the white pine tube builder, *Eulia pinatubana* Kearf., were observed April 15 and July 15, 1925, there being two broods, the caterpillars of the second brood hibernating in the tubes made of webbed needles.

Moths of the larch case bearer, *Coleophora laricella* Hubner, were observed May 21, 1925.

Caterpillars were collected July 8, webbing the terminal leaves of larch twigs together and feeding on them. Moths emerged August 5, 1925, but were destroyed by dermestids before they could be identified. They were probably of the genus *Recurvaria*, two species of which have been recorded as feeding on larch.

Moths of the lilac borer, *Podosesia syringae* Harris, were observed flying the first week in June.

Moths of the Rhododendron clearwing, *Aegeria rhododendri* Beutm., were observed from June 9 to June 18, 1925.

Moths of the peach borer, *Aegeria exitiosa* Say, were observed July 27, July 30 and August 3, 1925.

Dried up unopened peony buds were observed late in August and it was noticed that they were infested with small dark caterpillars. These were reared and found to be larvae of *Moodna ostrinella* Clemens. The moths emerged September 5th and later and some of the caterpillars had not yet pupated in January, 1926. This peony budworm seems to be widely distributed around Philadelphia.

Junipers of the prostrate variety of the species *communis* have usually been found infested with a distorting mite, *Eriophyes quadrisetus juniperinus* Nalepa, which causes a warting of the needles and often kills twigs.

The roots of recently killed pines and spruces have been found infested with the grubs of the white pine weevil, *Pissodes strobi* Peck, and of Pales weevil, *Hylobius pales* Boh. There is no external evidence of the presence of the grubs in the bark and sapwood of the roots except the death of the plants. The gnawing of the bark of the branches by the adult weevils is very noticeable. Adults have been beaten from infested trees in April, May, July and September.

Adults of the European sawfly, *Acantholyda erythrocephala* Linn., were beaten from Pine and *Cornus* at Chestnut Hill in May. This insect has not been recorded from the United States before.

Adults of the European birch sawfly leaf miner, *Fenusa pumila* Klug, were observed August 4th and a new generation

of adults appeared, from leaves collected August 7th, on the 5th of September.

Adults of the Crataegus sawfly leaf miner were observed swarming, mating and laying eggs on the 4th of May and full grown larvae were beginning to drop from the leaves June 1, 1925. This sawfly was *Profenusa collaris* MacGill.

A gall-forming maple borer was observed emerging on July 3, 1925. These borers, *Xylotrechus aceris* Fisher, were found in 125 trees of 221 red maples in one nursery.

An oak borer, *Arhopalus fulminans* Fab., was found killing large black oak trees in a woods near Paoli. An adult was captured July 23, 1925.

The linden borer, *Saperda vestita* Say, was observed emerging the 1st of May and later.

An adult long-horn, *Cyrtophorus verrucosus* Oliv., was taken on linden April 22, 1925.

Cornus gall-midges, *Cecidomyia* spp., were observed May 11, 1925.

The rose stem girdler, *Agrilus viridis* var. *fagi* Ratz., was observed June 2, 1924 and an unemerged adult was cut from a rose stem April 13, 1925.

The round headed apple tree borer, *Saperda candida* Fab., was observed on *Crataegus* leaves May 28, 1925.

Bark borers, *Ips* and *Tomicus* spp., were destructive to pines during the summer drought.

Adults of the mottled willow borer, *Cryptorhynchus lapathi* Linn., were observed July 24 and 28, 1925, and September 5 and October 16, 1924.

The dogwood sawfly, *Macremphytus versicolor* Norton, was abundant in 1925. The partly rotten base of a flowering dogwood was observed honeycombed by the larvae of this sawfly after their last molt seeking a place to pupate the last week in August. Red-twigged and other dogwoods were partially defoliated in July and August.

Adults of the box psylla, *Psylla buxi*, were observed in June, August and September, 1925.

Adults of the box leaf miner, *Monarthropalpus buxi* Labou.

were observed from May 7 till June 1, 1925 and the first week in June, 1924.

Oystershell scale crawlers were observed May 28, June 11 and 26, and August 13 and 27, 1924, and May 6 and 18, June 2, July 20, 24, 27 and 28, and August 3 and 12, 1925.

Pine needle scale crawlers were observed May 26 and August 13, 1924, and May 18, July 20 and July 28, 1925.

Scurfy scale crawlers were observed May 18, and July 27 and 29, 1925.

Euonymus scale crawlers were observed June 11, 19 and 26, and August 27, 1924, and May 18 and 26, June 2, July 27, and August 10, 1925.

San Jose scale crawlers were observed June 26, August 13, and October 14, 1924, and June 19, July 16, 27 and 30, and August 3, 12 and 27, 1925.

Juniper scale crawlers were observed June 29, 1924, and June 2, 10 and 23, 1925.

Tulip tree scale crawlers were observed June 9, 1924, and October 6, 1924.

European elm scale crawlers were observed July 27, 1925.

Galls of the Sitka spruce gall aphis on Colorado blue spruce opened the first half of July, 1925.

Large larvae and new cocoons of the European pine sawfly, *Diprion simile* Hartig, were observed June, 1925. Over-wintering cocoons were collected this fall.

August 26, 1925, European pine shoot moth larvae in buds.

September 9, 1925, a large sour gum, *Nyssa sylvatica,* was seen about a mile west of Oakmont, in Delaware County, the leaves of which were heavily infested with the larvae of the sour gum case cutter or leaf miner, *Antispila nyssaefoliella* Clemens, and the larvae had already begun to cut out oval cases from the leaves. The larvae of this moth have destroyed the beauty of this fine tree for many years according to its owner. Abundant work of these caterpillars was observed in the woods between Bryn Athyn and Willow Grove this fall. According to Dr. E. P. Felt, the larvae begin linear mines in July and expand them to blotch mines later.

Adults of a holly leaf miner, *Phytomyza* spp., were beaten from holly at Chestnut Hill, May 11, 1925.

Adults of *Elaphidion mucronatum* Say were taken on black oak at Berwyn, June 26, 1925. This beetle was suspected of being partly responsible for the death of a number of recently transplanted trees which were also infested with flat headed borers and fungi.

An adult female of *Purpuricenus humeralis* Fab. was taken on *Juglans sieboldiana* Maxim. near the Goshen Church, east of West Chester, August 12, 1925.

Thanks are due to Dr. E. P. Felt, Prof. H. E. Hodgkiss, Mr. Floyd Smith, with whom some of these observations were made and who sent a number of specimens to Washington for identification, and to the American Entomological Society, the collections of which were consulted for identification of specimens.

Capsus externus Herrich-Schaeffer is a Paracalocoris (Hemiptera, Miridae).*

By HARRY H. KNIGHT, Ames, Iowa.

No doubt most workers will agree that the recognition of a long lost species of an early entomologist gives much more satisfaction than the finding of a new or unnamed species. The present writer finds this to be particularly true of the species which forms the subject of this paper.

Some time ago Dr. H. M. Parshley sent me some interesting Miridae collected in Florida by Mr. C. W. Johnson. Among these I have recognized a species that I feel sure must be *Capsus externus* Herrich-Schaeffer, described in 1848 (Wanzenartigen Insecten, viii, p. 16, fig. 791) with locality given as "Wohl aus Nordamerika." In 1916 Mr. W. L. McAtee published a revision of the genus *Paracalocoris* Distant (Ann. Ent. Soc. Am., ix, pp. 366-390), with keys to the species and varieties which has proved a most useful contribution. It is interesting to note that *Capsus externus* H. S. was not

*Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

definitely placed at that time, but material was not available for study. In referring to this species Mr. McAtee states (p. 366): "Species that have been referred to *Paracalocoris*, probably erroneously, include two described by Herrich-Schaeffer. One of these, *Capsus tetrastigma* has been placed in *Resthenia* by Stal. The other, *Capsus externus*, in the writer's opinion, is not a *Paracalocoris*. It is true that the two central velvety black spots on the thorax mentioned in the original description suggest that the insect is a member of this genus, but no *Paracalocoris* has the first antennal joint "as long as head and thorax together," a condition plainly stated in the description and delineated in the illustration of *Capsus externus*." Van Duzee's Catalogue of Hemiptera (1917) places *externus* H. S. as a variety of *Paracalocoris scrupeus* (Say).

The most distinctive character of *externus* H. S. which impresses one at first glance, is the unusually long first antennal segment, and in certain specimens measured it is quite as long as prothorax and head taken together when viewed from the normal dorsal aspect. To correctly interpret the original description I believe we must consider the length of head and thorax as the distance between base of pronotum and front of head when the specimen is set with hemelytra approximately horizontal as viewed by the artist, and not tilted with pronotal disk horizontal as one would do when taking the greatest length of pronotum. Two specimens of *externus* H. S. are at hand which agree in all details of coloration with the original figure (fig. 791) except that the front of the head is black, leaving a pair of orange glabrous spots each side of vertex and a smaller spot just above base of each antenna; in addition the anterior half of the calli also black. These specimens are so nearly typical that I feel they should be classed as such. Both specimens have the lateral margins of the scutellum narrowly black just as shown in the original figure, a detail worth noting in recognizing the typical form of the species. For purposes of comparison the following description is offered with accurate measurements of critical characters.

Paracalocoris externus (Herrich-Schaeffer), Wanzenartigen Insecten, viii, p. 16, fig. 791, 1848.

♂. Length 7.1 mm., width 3.1 mm. Head: width 1.23 mm., vertex .57 mm., length .94 mm. Rostrum, length 2.43 mm., just attaining posterior margins of intermediate coxae. Antennae: segment I, length 1.64 mm.; II, 2.77 mm.; III, 1.11 mm.; IV, .91 mm.; black, segment IV reddish brown on basal half. Pronotum; length 1.47 mm., width at base 2.36 mm.; length of head and pronotum as viewed from above when body is held horizontal, 1.65 mm., which is practically equal to length of antennal segment I. This distance is less than the actual greatest length of pronotum (1.47 mm.) and head (.94 mm.) which is obtained when the disk of pronotum is turned up to a horizontal position.

♀. Length 7.2 mm., width 3.2 mm. Head: width 1.21 mm., vertex .57 mm. Antennae: segment I, length 1.64 mm.; II, 2.57 mm.; III, 1 mm.; IV, broken. Pronotum: length 1.5 mm., width at base 2.34 mm. Length of head and pronotum as viewed from above when body is held horizontal, 1.8 mm., which is only slightly greater than length of antennal segment I.

Plesiotypes: ♂ ♀ April 18, 1919, St. Augustine, Florida (C. W. Johnson); author's collection.

The genital claspers of *externus* H. S. are very similar to those of other species in the genus, the left clasper having at upper side of base a rounded lobe which tapers to a point posteriorly. This character is the best I have found for separating the species of *Paracalocoris* Dist. from those of *Calocoris* Fieber. *Externus* H. S. is about the size of *limbus* McAtee but the first antennal segment is longer as indicated; the pilosity of the hind tibiae is short as in *limbus*.

Certain color varieties of *Paracalocoris externus* H. S. are at hand and all of them have the dark areas deep black and contrasting sharply with the orange colored hypodermal areas. There is no indication of intergrade shades of color such as appear in varieties of *scrupeus* (Say), for example *delta* McAtee and *varius* McAtee. The color varieties studied may be separated by the following key.

Key to color varieties of Paracalocoris externus H. S.

1. Hemelytra with embolium and cuneus orange colored.... 2
   Hemelytra with embolium and cuneus black..... 3

2. Scutellum orange colored.....typical *externus* H. S.
   Scutellum black.....*solutus* n. var.
3. Scutellum with some orange color..... 4
   Scutellum entirely black..... 5
4. Scutellum orange colored, with not more than narrow lateral margins black; pronotum with orange color extending transversely across hind margins of calli, including the pair of impressed spots, and reaching upon the propleura, also extending posteriorly along median *novellus* Blatch.
   Scutellum with median line only orange colored, *scissus* n. var.
5. Pronotum transversely marked with orange nearly as in *novellus* .....*totus* n. var.
   Pronotum black between the calli and along median line of disk, the orange color reduced to a small area each side which includes the impressed spots then extending laterally upon the propleura.....*notatus* n. var.

Paracalocoris externus solutus n. var.

Structurally not differing from the typical *externus* H. S. but with the scutellum uniformly black.

Type: ♀ April 18, 1919, St. Augustine, Florida (C. W. Johnson); author's collection.

Paracalocoris externus novellus Blatchley.

Paracalocoris novellus Blatchley, Ent. News, xxxvii, p. 163, 1926.

Pronotum and scutellum colored nearly as in the typical *externus* H. S. but differs in having the hemelytra uniformly black.

Records: FLORIDA—♂ April 6, Daytona, ♀ April 18, 1919, St. Augustine (C. W. Johnson). ♀ Dec. 19, 1915, ♀ April 19, 1920, Dunedin; ♀ April 15, 1913, Ormond (W. S. Blatchley). ♀, Inverness (Robertson). GEORGIA—♂ May 1, 1903, Thomasville (antennae broken).

Paracalocoris externus scissus n. var.

Pronotum colored as in *novellus* but scutellum black with narrow median line orange colored; legs entirely black.

Type: ♀ April 20, 1919, St. Augustine, Florida (C. W. Johnson); author's collection. *Paratype:* ♀ April 15, 1915, Ormond, Florida (W. S. Blatchley).

Paracalocoris externus totus n. var.

Pronotum colored as in *novellus* but the scutellum uniformly black.

Type: ♂ April 20, 1919, St. Augustine, Florida (C. W. Johnson); author's collection. *Paratype:* ♀ December 19, 1915, Dunedin, Florida (W. S. Blatchley).

Paracalocoris externus notatus n. var.

Black, the pronotal disk with orange color reduced to a small area each side which includes the impressed spots then extends laterally to cover dorsal half of propleura; femora orange colored on middle.

Type: ♂ April 20, 1919, St. Augustine, Florida (C. W. Johnson); author's collection.

The Coleoptera of the Sandhill Region of Medora, Reno County, Kansas.

By WARREN KNAUS, McPherson, Kansas.

The Sandhill Region of Medora is located 25 miles southwest of McPherson, and 7 miles northeast of Hutchinson, Kansas. The Rock Island and Frisco Railways intersect at the small town of Medora, two miles from the crest of the sand hills. The hills extend about 10 miles southeast and approximately 15 miles west and north-west. The width of the belt is from one to one and a half miles and the altitude is about 1500 feet. Little River flows from one to three miles north of the hills.

Between the hills are small valleys and draws, with running rivulets and ponds in the blowouts in wet seasons.

Small groves of cottonwoods, willows and sand plums are scattered over the region with "Button brush", *Cephalanthus occidentalis;* the grasses and flowering and other plants, grow luxuriantly in the valleys and small meadows. Yuccas, wild morning glory, two or three species of *Asclepias,* sensitive and wild roses are found in the hills.

It is the object of this paper to call the attention of entomologists to this region as a prolific breeding ground for all orders of insects and especially of Coleoptera.

In a paper as restricted as this one, only the outstanding and rare species taken in this region can be mentioned.

In Cicindelidae, sixteen species, varieties and forms are found, the more conspicuous and rare are: *formosa* Say, *lengi* W. Horn, form *wichitana* Csy., *scutellaris* Say, and the form with an ante-apical white spot on each elytron, *cuprascens* Lec., and the form *insomnis* Csy. In *Pasimachus,* of the Carabidae, the form *angustulus* Csy., of *elongatus* Lec., and *obsoletus* Lec., a plains form; *Helluomorpha praeusta* Dej., *Chlaenius nebraskensis* Lec., *Geopinus fluviaticus* Csy., *Nothopus valens* Csy., *Stenomorphus scolopax* Csy. In Dytiscidae, *Eretes sticticus* Linn. In Gyrinidae, *Gyrinus analis* Say. In Coccinellidae, *Brachyacantha albifrons* Say. *Cardiophorus cardisce* Say, on white sand, and *Orthostethus infuscatus* Germar, on willows and decaying watermelons in August and September, in Elateridae.

Buprestidae are represented by *Anthaxia viridifrons* Gory and *Agrilaxia flavimana* (Gory). *Chrysobothris,* form *alabamae* Gory of *femorata* (Oliv).

In Cleridae the rare *Hydnocera knausi* Wick, is occasionally taken by beating. Characteristic Tenebrionidae are *Lobometopon plumbeum* Lec., and *Bothrotes knausi* Csy. *Eleodes hispilabris,* form *nupta* Lec., the rarest of *hispilabris* forms, occurs from April to September. *Ammodonus fossor* Lec., hardly distinguishable from the sand, can be taken from June to August.

The species of Scarabaeidae are especially abundant. *Canthon depressipennis* Lec., and *praticola* Lec. occur occasionally. *Canthon lecontei* Harold, the smallest *Canthon* in this region, occurs the last half of June and the first half of July. The eggs are laid on rabbit droppings which are buried from one to two inches in the sand. Small mounds of sand indicate the female may be found at the bottom of the burrow and frequently the male also.

Phanaeus difformis Lec. is the prevalent representative here of the genus and is fairly abundant, but differing much in size and the length of the frontal horn.

Onthophagus is represented by three characteristic species,

guatemaliensis Bates, a blueblack species reaching up from Central America, and *tuberculifrons* Harold, recognized for the first time this season by W. J. Brown of the Department of Entomology of the A. & M. College, Stillwater, Okla. This species occurs with *pennsylvanicus* Har. and resembles it very closely in appearance.

Two *Aphodius* distinctive of this region are *knausi* Fall, a small pale species attracted to light the first half of July, taken here first in 1923, and a larger species, *walshi* Horn.

Two species of *Ataenius* that come to light are *figurator* Harold and *cognatus* Lec.

One *Ochodaeus,* fairly common to light, June and July, is *kansanus* Fall. *Bolboceras fossatus* (Hald.) is a brownish yellow species of fairly large size that is taken in limited numbers each season in June and July. It burrows a perpendicular hole from 8 to 12 inches in the sand and also is attracted to light. It has great strength, and forces its way into the sand, rarely throwing sand above or around the opening of the burrow.

Odontaeus filicornis (Say) is rarely taken at light.

Geotrupes is represented by *opacus* Hald.

The rare form of Troginae found here is *Glaresis inducta* Horn. A specimen or two was taken at light in July, 1923, and this last season ten came to light July 24. The sand hills are the northern range of this species.

The rare species of *Serica* is *ochrosoma* Dawson. It is taken only sparingly at light April-May—never in numbers.

Diazus rudis Lec. is taken in July on bare sand late in the afternoon.

Phyllophaga lanceolata (Say), *crassissima* (Blanch.), *bipartita* Horn and *rugosa* (Melsh) are common species.

P. longitarsus Say was first taken here early in July, 1923, at light, and July 24th, this year, 375 specimens were taken at light in less than two hours. During this time 18 specimens of *gracilis* (Burm.) were taken—all females.

Polyphylla hammondi Lec., is the only species of the genus taken here; June-July at light.

Anomala ludoviciana Sch. occurs the last week of June and

the first week in July on bare sand or low vegetation, mating; most abundant from 5 to 7 o'clock in the afternoon.

A variety, *modulata* Csy., is attracted to light in July.

A new species of *Strigodermella, knausi* Brown, was taken by sweeping in 1923 and 1925 and will be described by W. J. Brown of the A. & M. College, Stillwater, Oklahoma.

Cotalpa suscribrata Wick., occurs in May-June and feeds on willows and cottonwoods early in the evening. During the day it clings to the leaves and twigs.

Strategus mormon Burm. is the largest finest Scarabaeid found north of the range of *Dynastes tityus* L. It was first taken in this region. a pair, May-June 1913. Since then it has been taken abundantly. Its burrows are usually under, or adjacent to, a horse or cattle dropping from six months to a year old. Burrows are from a half to three-fourths of an inch in diameter and usually made by the male and are from 4 to 12 inches deep in the sand. The fibers from the droppings are packed around the bottom of the burrow and contain the eggs. The males appear April, May, and the females are the last to be found alive as late as July 6-10.

Two specimens of the rarest *Euphoria, aestuosa* Horn, have been taken in this region, both in April-May. The species was described from Kansas. *Cuprascens* Csy., a variety of *sepulchralis,* is taken here in flowers in August. *Stephanucha pilipennis* Kratz, is also taken here, April-May, Sept.

In Cerambycidae, *Parandra brunnea* (Fab.) came to light July 24th.

Cyllene chara (Say) and a variety, and *lutosa* Lec. are taken in August and September on golden rod blossoms.

The strikingly handsome *Plectrodera scalator* Fab. is taken June-July, mating.

Tetraopes canescens Lec. is found each year feeding on the broad-leaved milkweed, June-July.

Chrysomelidae are fairly numerous in species. *Lema cornuta* Fab. and *collaris* Say are swept from low growing plants.

Pachybrachys diversa Fall, *vestigialis* Fall, *liebecki* Fall, *atomarius* Melsh, *pawnee* Fall and *luridus* Fall are taken on willows.

Metachroma parallelum Horn is found on willows during the day but flies early in the evening and feeds on cottonwood foliage. The male is black but the female is brownish yellow in color.

Zygogramma disrupta Rogers and *Calligrapha scalaris* Lec. are beaten from willows.

An undescribed species of *Anisostena* was beaten from willows June 18, 1907.

Mylabrina discoideus Say occurs in July-August, feeding during the day on *Convolvuli* and flying to light at night. All males taken Aug. 25.

In Curculionidae, *Apion robustum* Sm., *occidentale* Fall and *attenuatum* Say are found on sunflowers.

Chalcodermus collaris Horn also taken on sunflowers.

Calandra robustus Horn, *medorensis* Satth., *costipennis* Horn, *maidis* Chitt., May-June, *soltaui* Chitt., July, and *destructor* Chitt., May, all occur in this region. *Maidis* and *destructor* damage growing corn.

Scores of Coleoptera not listed in this paper are in my collection taken in this region. It is equally rich in the other orders of insects. The sheeted background of a 300 candle power gasoline lantern on a quiet July evening in the dark of the moon, by 9.30 o'clock will be crowded with a seething mass of night flying beetles, Noctuid, Geometrid, Pyralid and other moths, Neuropteroid insects, Hymenoptera and Hemiptera. The region is a paradise for insect life and a source of never ending delight to the collector.

Some day this Medora Sand Hill region will be set aside and reserved for insect, bird and wild animal life.

Georgiaphis Nom. n. for Georgia (Aphididae, Homop.).

In the May number of ENTOMOLOGICAL NEWS the writers erected the tribe *Georgiini* for the genus *Georgia*. When Wilson established the genus *Georgia* for his species *ulmi* in 1911, the name had already been used by Baird in 1853 in the Reptilia, by Thomas in the Coleoptera in 1857, and by Bourguignant in the Mollusca in 1882. Since then the name has been used by Hall as a generic name in the Arachnida.

This fact makes necessary the selection of new names for the genus and tribe, for which *Georgiaphis* and *Georgiaphidini* are suggested.

Shortly after our paper appeared, the junior author came across a paper by Mordwilko in which he places *Georgia* as a synonym of *Colopha* Monell. In this we do not agree. The only real resemblance between the two is the absence of one vein in the hind wing. The galls produced by the two genera differ; *Colopha* produces a true gall while *Georgiaphis* merely causes the leaves to curl. The wax pores of the two differ in structure; Mordwilko mentions the fact that they might, but apparently had no material upon which they could be made out. The sequence of generations is different. *Colopha* has the *Pemphigus* type of life history while the life history of *Georgiaphis* does not resemble any known type of the sub-family. These reasons seem to us to be more than sufficient for retaining the genus proposed by Wilson under the new name.

Thanks are due Prof. T. D. A. Cockerell for calling our attention to the fact that the name *Georgia* was preoccupied.

A. C. Maxson, Longmont, Colorado, and F. C. Hottes, Dept. of Animal Biology, University of Minnesota, Minneapolis, Minnesota.

Personals.

On the recommendation of Professor F. V. Theobald, the noted Dipterist, of the Agricultural College, Wye, Kent, England, H. F. Barnes, a scholar of the Ministry of Agriculture and Fisheries, will spend a part of his scholarship, some 5 months beginning October 1, 1926, studying the gall midges, Itonididae, under the direction of Dr. E. P. Felt, State Entomologist, a world-recognized authority in this large and important group.

Mr. S. A. Rohwer spent several days at the Philadelphia Academy studying the types of Hymenoptera.

Dr. A. W. Lindsay of the Indiana University has been studying the types of Cynipidae at the same Academy.

Dr. C. E. Mickel of the University of Minnesota spent a few days here studying the types of Dasymutilla.

Dr. M. D. Leonard is now entomologist of the Wilson Toomer Fertilizer Co., Orlando, Fla.

Mr. Henry L. Viereck has resigned from the Entomological Branch, Canadian Dept. of Agriculture, and is located in Philadelphia.

ENTOMOLOGICAL NEWS

PHILADELPHIA, PA., OCTOBER, 1926.

Notice of Request to Admit Hübner's (1806) "Tentamen" to Nomenclatorial Status under Suspension of International Rules. (Lepid.)

The Secretary of the International Commission on Zoological Nomenclature has the honor to invite attention of the zoological profession to the fact that application has been made for the Suspension of the International Rules, in the case of Hübner's (1806) "Tentamen" in order to establish its nomenclatorial availability.

Briefly summarized: The formal nomenclatorial status of this document, involving about 100 names admitted by some authors as of generic rank, has been under controversy for many years, and opinion of specialists in *Lepidoptera* is still divided.

The arguments, as submitted, in favor of Suspension of Rules, maintain that: (1) there are sound reasons both for admitting and for denying recognition to the "Tentamen," from the standpoint of interpreting the Rules; (2) the evidence *pro* and *con* is not sufficiently conclusive to remove the question from debate; (3) the rejection of the "Tentamen" will produce greater confusion than uniformity, will necessitate a vast amount of undesirable labor and economic loss of time and work; (4) if, on the ground of expediency, the Rules can be suspended in this case, the nomenclature of the *Lepidoptera*, as used for the past 30 years, can be largely maintained.

The "Tentamen" is one of the most important and most controversial cases ever submitted to the Commission. A discussion, with essential bibliographic references, will be found in "Smithsonian Misc. Coll., v. 73(4)" (now in press).

The Commission will delay announcement of vote. on the requested Suspension, at least until Sept. 1, 1927, in order to give interested authors, and especially entomological societies. opportunity to study the premises and to present to the Commission their views and arguments, *pro* and *con*, regarding the action requested.

In order to protect groups other than *Lepidoptera*, a prerequisite to Suspension of Rules would be that representative specialists in *Lepidoptera* agree upon and furnish the Commission definite bibliographic references to the 107 names which they view as genotypes.

C. W. STILES, Secretary to Commission,
U. S. Hygienic Laboratory, Washington, D. C.

August 21, 1926.

Vernacular Names for Insects.

The writer has collected thousands of vernacular names of birds, and hundreds of them for plants, and is convinced of the great desirability of placing on record all such terms and their usage which may prove to be either very local or rather general, or fleeting or lasting. Whatever the vagaries of local names, they remain the best source of satisfactory standard vernacular names, for which there is a steadily increasing demand. Will not some entomologist cultivate this very interesting field, and give us a basis for a set of vernacular names that will have some intrinsic significance? In this search it is well to consult books, and it is necessary to consult men, preferably in the course of field work, and in as many regions as practicable. Mrs. Annie Trumbull Slosson has written (Journ. N. Y. Ent. Soc., Vol. 1, No. 1, March, 1893, pp. 1-5) entertainingly of some of her experiences along this line, and clearly points out the possibilities of the quest.

If the same rule applies to insects that is apparent among birds and plants, the more strongly characterized forms will prove the more stimulating to the production of local names. In illustration of this principle may be cited the Gyrinids, unique in appearance and behavior, and already known to be the recipients of a variety of vernacular appellations. Lackey bugs (Mass.), sugar bugs (Md.), apple bugs (N. J., Md., Ind.), and eel bugs (N. C.), are terms applied to them, besides the deliberately invented but also very appropriate Comstockism "whirligig beetles."

Local names of insects as well as those of birds and plants will be found linked with folk lore. Examples that occur to me at the moment are the doodle bug of children's rhymes, pointers (for finding lost articles, Phalangids, Ind.), and love bugs (talismans for overcoming feminine coyness, *Cicindela 6-guttata*, Md.). The study of local names is one of many-sided interest, and whoever undertakes it will not only benefit those who must talk and write about insects, but also will have a hobby rich in interest and pleasure.—W. L. McAtee, U. S. Dept. Agriculture, Washington, D. C.

On the Nomenclature of a Species of Polites (Lep. Hesperiidae).

Polites themistocles Latr.

1823, Latreille, Encyc. Method., IX, 723, 769, ignot., *Hesperia.*

taumas Fabr. (lapsus calami)

1787, Fabricius, Mant. Ins., II, 84, *Papilio*, "P. P. V."

1924, Skinner & Williams, Trans. Am. Ent. Soc., L, 152, f. 11 ♂ genit., *Polites.*

thaumas Fabr. (homonym)

1793, Fabricius, Ent. Syst., III, (1), 327, *Hesperia; "H. U."* ♀ *phocion* Fabr. (homonym)

1798, Fabricius, Ent. Syst., Suppl., p. 431, *Hesperia, "H. U."* *cernes* Bdv. & Lec.

1833, Boisduval & Leconte, Lep. Am. Sept., pl. LXXVI, ff. 1-2, *Hesperia.*

ahaton Harris.

1862, Harris, Ins. Mass. Inj. Veg. Ed. III, 317, f. 140, *Hesperia.*

"Papilo taumas" Fabr. was apparently a lapsus calami or typographical error and emended to *thaumas* by Fabricius, both names with the same types. Under Art. 19 of the International Code such errors may be corrected. The name *taumas* therefore becomes unavailable. *"Hesperia thaumas"* Fabr. is a homonyn of *thaumas* Hufn. and is unavailable. *"Hesperia phocion"* Fabr. was sunk as a homonym by Latreille, because of another *"Hesperia phocion"* Fabr. Latreille erected the name *themistocles* in place of *phocion.* The species was unknown to him. His name takes the same type as *phocion.*

The name *themistocles* has been generally omitted from North American lists. The latest revisional paper, by Skinner and Williams, uses *taumas* for the name of the species.

WM. BARNES & F. H. BENJAMIN, Decatur, Illinois.

Entomological Literature

COMPILED BY E. T. CRESSON, JR.

Under the above head it is intended to note papers received at the Academy of Natural Sciences, of Philadelphia, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species will be recorded.

The numbers in Heavy-Faced Type refer to the journals, as numbered in the following list, in which the papers are published.

All continued papers, with few exceptions, are recorded only at their first installments.

Papers of systematic nature will be found in the paragraph beginning with (N). Those pertaining to Neotropical species only will be found in paragraphs beginning with (S). Those containing descriptions of new forms are preceded by an *.

For records of Economic Literature, see the Experiment Station Record, Office of Experiment Stations, Washington. Also Review of Applied Entomology, Series A, London. For records of papers on Medical Entomology, see Review of Applied Entomology, Series B.

Papers published in the Entomological News are not listed.

4—Canadian Ent., Guelph. **6**—Jour., New York Ent. Soc., New York. **7**—Ann., Ent. Soc. America, Columbus, Ohio. **9**—Entomologist, London. **10**—Proc., Ent. Soc.

Washington. **12**—Jour. of Economic Ent. **14**—Ent. Zeitschrift, Frankfurt a. M. **17**—Ent. Rundschau, Stuttgart. **18**—Intern. Ent. Zeitschrift, Guben. **20**—Societas Entomologica, Stuttgart. **21**—The Entomologist's Record. **25**—Bull. Soc. Ent. France. **27**—Bull. Soc. Ent. Italiana. **39**—The Florida Entomologist. **42**—Ent. Meddelelser, Kjobenhaven. **49**—Ent. Mitteilungen, Berlin. **50**—Proc., U. S. National Museum. **54**—Bol. Soc. Ent. Espana. **55**—Pan-Pacific Ent., San Francisco. **56**—Konowia, Wien. **58**—Ent. Berichtens, s'Gravenhage. **59**—Encyclopedie Entomologie, Paris. **60**—Stettiner Ent. Zeitung. **61**—Proc., California Acad. Sci. **67**—Bull. Soc. Ent., Egypte. **70**—Entomologica Americana, Brooklyn. **71**—Novitates Zoologicae. **72**—Revue Russe d'Entomologie. **75**—Ann. & Mag. of Nat. Hist., London. **77**—Comptes R., Soc. Biologie, Paris. **78**—Bull. Biol. France et Belgique. **107**—Biologisches Zentralblatt. **109**—Ann. Hist. Nat. Mus. Nat., Hungarici. **116**—Annals of Applied Biology. **134**—Annales de Biol. Lacustre, Brussels. **138**—American Mus. Novitates. **141**—Amer. Naturalist. **154**—Zool. Anzeiger, Leipzig.

GENERAL—Bequaert, J.—Medical and economic entomology. Pt. 2 of Medical Rept. of the Hamilton Rice 7th Exped. to Amazon. Cont. from Harvard Inst. for Trop. Biol. & Med., No. 4 p. 157-257. **British Museum.** Dates of publication of early catalogues of natural history issued by the British Museum. By C. D. Sherborn.—**75,** xvii, 271-2. [This list includes most of those on insects.] **Cave, C. J. P.**—The physical basis of insect drift.—Nature, cxviii, 50. **Collecting** and preserving insects.—Mary. Acad. Sci., Bull., v, **37-48. Cresson, E. T.**—Obituary note.—Science, lxiv, 8-9. **Davis, A. C.**—Preparation of soft bodied insects.—**55,** ii, p. 180. **Fulda, O.**—Sammelreise nach Kuba.—Insektenbörse, xliii, 17, (Cont.). **Gossard, H. A.**—Memorial to.—**7,** xix, p. 255-7. **Hayward, K. J.**—A simple breeding cage.—**21,** xxxviii, 93-4. **Horn, W.**—Ueber den verleib der entomologischen sammlungen der welt.—Suppl. Ent., Nr. 12, 133 pp. **Hunter, W. D.**—Memorial to.—**7,** xix, p. 257-8. **Kuekenthal u. Krumbach.**—Handbuch der zoologie. Bd. iv, Lief. 1. (See **Attemus** under Arachnida.) **Le Cointe, P.**—L'Amazonie Bresilienne. Tome ii, Insectes, p. 369-400. **Lucas, W. J.**—Insect orders.—Proc. So. London Ent. & N. H. Soc., 1925-26, 1-6. **Meissner, O.**—Kurze bemerkungen über einige neuere naturwissenschaftliche theorien. X. Das Hasebroeksche phänomen.—**20,** xxxxi, p. 29-30. **Poehl-**

mann.—Rückgang der insektenwelt.—**17,** xliii, p. 25-26. **Shannon, H. J.**—A preliminary report on the seasonal migrations of insects.—**6,** xxxiv, p. 199-206. **Tillyard, R. J.**—Fossil insects in relation to living forms.—Nature, cxvii, 828-30. **Van Duzee, E. P.**—An entomological code.—**55,** ii, p. 214-5. **Wade, J. S.**—The friendship of two old-time naturalists [Dr. T. W. Harris and H. D. Thoreau].—Sci. Month., 1926, 152-160. **Weiss, H. B.**—Entomological observations of Captain Cook.—**6,** xxxiv, p. 222.

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(N) ***Miner, R. W.**—A fossil myriapod of the genus Parajulus from Florissant, Colorado.—**138,** No. 219, 5 pp. ***Nuttall, Warburton & Robinson.**—(See **Ticks** under Special).

(S) **Bequaert, J.**—(See under General, p. 168-178). **Franganillo, R. P. P.**—Aracnidos nuevos o poco conocidos de la isla de Cuba.—**54,** ix, p. 42-68. ***Oudemans, A. C.**—Acarologische aanteekeningen. **58,** vii, 97-102.

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(S) ***Navas, R. P. L.**—Algunos insectos del Brasil.—Broteria, xxiii, 5-15. ***Priesner, H.**—Un genero nuevo y curioso del orden physopodos o thysanopteros de Mexico. Ein neues, absonderliches Thysanopteren genus aus Mexiko.—Mem. y Rev. Soc. Cien., Ant. Alzate, xliv, 485-9. **Watson, J. R.**—Adiciones a los Thysanoptera de Cuba.—Mem. Soc. Poey, vii, 46-7.

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(S) ***Alexander, C. P.**—Studies of the crane flies of Mexico. II.—**7,** xix, p. 158-79. **Bequaert, J.**—A dipterous parasite of a snail from Brazil, with an account of the arthropod enemies of mollusks.—Med. Rept. Hamilton Rice 7th Exped., p. 292-303. **Bequaert, J.**—(See under General; p. 193-249). ***Borgmeier, T.**—Novos subsidios para o conhecimento da familia Phoridae.—Arch. Mus. Nac. R. d. Janeiro, xxv, 85-281. ***Curran, C. H.**—New D. from the West Indies.—**138,** No. 220, 14 pp. **Duda, O.**—Die Costaricanischen Drosophiliden des Ungarischen nationalmuseums zu Budapest.—**109,** xxii, p. 149-229. ***Malloch, J. R.**—New genera and sps. of acalyptrate flies in the U. S. N.

M.—**50,** lxviii, Art. 21. ***Seguy, E.**—Sur deux calliphorines nouveaux.—**25,** 1926, 62-4. **Wieland, G. R.**—South American fossil insect discovery.—Am. Jour. Sci., xii, 130-5.

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(N) **Beamer, R. H.**—Notes on Griburius montezuma (Chrysomelidae).—**55,** ii, p. 209-10. **Bernhauer et Scheerpeltz.**—Coleopterorum catalogus. Pars 82. Staphylinidae VI, 499-988 pp. **Chittenden, F. H.**—An introduced beetle related to the tomato weevil.—Proc. Biol. Soc. Wash., xxxix, 71-4. ***Gentner, L. G.**—New N. Am. Halticinae with notes on other species.—**4,** lviii, 149-54. **Hetschko, A.**—Coleopterorum catalogus. Pars 85. Lathridiidae, 86 pp. Pars 83, Thorictidae, Catopochrotidae, Monoedidae, Synteliidae, Cossyphodidae, 15 pp. **Horn, W.**—Coleopterorum catalogus. Pars 86, Carabidae: Cicindelinae. 345 pp. **Mutchler & Weiss.**—Leaf beetles of the genus Galerucella known to inhabit N. Jersey.—N. J. Dep. Agr., Circ. 98. **Obenberger, J.**—Coleopterorum catalogus. Pars 84. Buprestidae I,

212 pp. **Pic, M.**—Coleopterorum catalogus. Pars 87. Phloeophilidae, Rhadalidae, Prionoceridae. 11 pp. **St. George, R. A.**—Taxonomic studies of the larvae of the genera Tenebrio and Neatus.—**10,** xxviii, 102-111. ***Tanner, V. M.**—A n. sp. of Plastoceridae in the genus Euthysanius.—**55,** ii, p. 188-90.

(S) ***Fisher, W. S.**—Descriptions of new West Indian longicorn beetles of the subfamily Lamiinae.—**50,** lxviii, Art. 22.

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SPECIAL NOTES

Animal Ecology, with special reference to insects. By R. N. Chapman. Burgess-Brooke, Inc., Minneapolis. This is a mimeographic production in two parts of 187+183 sheets respectively, and represents the outline of a course in the ecology of insects which has been offered at the University of Minnesota for nine years.

British Spiders: Their haunts and habits. By T. H. Savory. Oxford Univ. Press, 1926, 180 pp., ill. $2.00. This small octavo book, altho treating of British spiders, should be interesting to American students, especially to those who would like to take up the study of these animals. The author divides his book into two parts, the first part going into the life history of the spider, its instincts, senses, and anatomy. All told in a manner easily understood. The second part takes up the classification of the more common spiders, giving the student a general idea of the taxonomy. An appendix, includes directions on collecting and preserving, a bibliography of the principal works published in Europe and America, and finally a glossary. On the whole a very readable book for any nature student.

Entomologica Americana. Published by the Brooklyn Entomological Society. Once more takes its place among our current journals. The publication will be issued in four numbers a year, and will average approximately 50-60 pages to a number. Each number will carry one paper such as monographs, synopses of smaller groups, biological studies, morphology, embryology, revisions and other lengthy productions. The annual subscription price is set at $4.00 a volume.

Entomological collections. In Supplementa Entomologica, Nr. 12, 133 pp. Dr. Walther Horn has an extensive paper entitled "Ueber den Verleib der entomologischen Sammlungen der Welt (ein Beitrag zur Geschichte der Entomo-Museologie). This work should be found useful by entomologists. The collections are listed alphabetically under their original owners, with present locations given.

The Fauna of British India. A volume of this famous work on coleoptera treats of the subfamilies Chrysomelinae

and Halticinae of the Chrysomelidae. By S. Maulik, 442 pp., map of India.

Proceedings of the Pacific Coast Ent. Society. Vol. 2, No. 4, pp. 47-66. This number records the minutes of the 95th to 99th meetings, and the students of the coleoptera will find some interesting notes therein, especially on the Meloidae, Hydrophilidae and Tenebrionidae. Also on forest insects.

Ticks; a monograph of the Ixodoidea. By G. H. F. Nuttall and C. Warburton. Part 3 of this work treats of the genus Haemaphysalis, contained in pages 349-550 of Vol. I. Part 4 treats of the genus Amblyomma by L. E. Robinson and commencing Vol. II, 302 pp. These parts contain some new species from S. America.

The Zoocecidia of the Netherlands East Indies. By Mrs. J. and Dr. W. M. Doctors van Leeuwen. This comprehensive work of 601 pages and numerous illustrations will probably prove useful to any student of insect galls.

It is so much easier and more satisfactory to list titles which include the order and family treated, that we recommend all authors to indicate such when ever possible.

OBITUARY.

The Abbé JEAN JACQUES KIEFFER died December 30, 1925, at Bitche (Moselle) in his 69th year. For many years he was on the teaching staff of the Saint-Augustin College at Bitche, Lorraine. His published papers, from 1884 on, deal with the flora and fauna of that province, including Neuroptera and gall-forming insects of several orders, with gall-making Diptera and Hymenoptera and, in most recent years, with Chironomidae from all parts of the world. An obituary notice by F. W. Edwards is in the *Entomologist's Monthly Magazine* for February, 1926; a list of his papers from 1884 to 1900 is in vol. XVI of the *Royal Society's Catalogue of Scientific Papers.* His article on the Cecidomyiidae, in Wytsman's *Genera Insectorum,* was reviewed at some length in the NEWS for April, 1914 (vol. xxv: 185-188) by Dr. E. P. Felt. His voluminous monograph of the proctotrupoid (Hymenopterous) family Scelionidae, of nearly 900 pages, forming lieferung 48 of the encyclopedic series, *Das Tierreich,* has been published, March, 1926, since his death.

EXCHANGES

This column is intended only for wants and exchanges, not for advertisements of goods for sale. Notices not exceeding three lines free to subscribers.

These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

Wanted—For Cash. U. S. Bureau of Entomology Technical Series 5; and Bureau Circular 3, 27, and 132.—State Entomologist. Capitol Annex, Madison, Wisconsin.

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Buprestidae—I am making a revisional study of the North American Agrilus, and will be glad to examine any material in this genus collected north of Mexico. W. S. Fisher, U. S. National Museum, Washington, D. C.

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